



BANKING POLICY REVIEW

Did Dodd–Frank End ‘Too Big to Fail’?

Despite reforms, do big banks still benefit from market perceptions that the government will bail them out if they falter?

BY RYAN JOHNSTON

During the financial crisis in 2008, the U.S. government bailed out some very large banks for fear the collapse of any bank that large would profoundly harm the U.S. economy and destabilize the global financial system.¹ That is, they were too big to be allowed to fail. Passage of the Dodd–Frank Act two years later was intended to rule out future bailouts through tighter safety-and-soundness requirements, among other measures. Yet, some worry that investors may still view certain banks as “too big to fail,” a perception that would confer an arguably unfair and potentially risky funding advantage over smaller banks. If a bank’s uninsured depositors or bondholders expect to be protected against losses, they will accept lower interest rates. So, in principle, we should be able to compare the rates paid by the largest banks with those paid by smaller banks for evidence of whether Dodd–Frank was successful in eliminating markets’ bailout expectations. But as this review will explain, the many differences between large and small banks make it hard to know whether we are comparing apples with apples. We review studies that address this apples-to-apples problem and help determine whether large banks still receive what is, in effect, a government subsidy.

A primary stated goal of Dodd–Frank is to get rid of the perception that the largest banks are too big to fail (TBTF).² It aims to do so through a number of mechanisms. An annual stress test is required for banks with assets greater than \$50 billion. The test uses hypothetical economic and financial market scenarios of varying severity to measure the impact on the value of banks’ capital. If the test indicates that a bank’s capital levels would fall below regulatory requirements under the severe stress scenario, the bank might be prohibited from making any dividend payments

or other capital distributions.³ The results of banks’ stress tests are posted on the Federal Reserve Board of Governors website and widely reported. Maintaining capital levels that internally absorb economic shocks strengthens public confidence that big banks will not need to be bailed out during an economic or financial downturn.⁴

Title II of Dodd–Frank gives the Federal Deposit Insurance Corporation (FDIC) authority to resolve a large, complex financial institution that is close to failing. Among other things, it prohibits the use of taxpayer funds and imposes losses on shareholders and creditors.⁵

Furthermore, in 2015 the Federal Reserve Board approved a rule requiring firms it deems globally systemically important banks (GSIBs) to maintain a larger capital cushion — more than that required of smaller banks — in order to increase their resiliency against financial distress. This so-called capital surcharge is based on the amount of risk a GSIB poses to financial stability, or its “systemic footprint,” and provides a stronger buffer against capital shortfalls that a large bank may experience.⁶

Although Dodd–Frank has made significant progress toward strengthening the financial system, some analysts and policymakers have argued that markets still perceive the largest banks as TBTF. In particular, they have argued that the largest banks have a funding advantage over smaller banks because of this perception.

Lingering perceptions that some banks remain TBTF might be a concern for a few notable reasons. First, depositors, bondholders, and other creditors that perceive large

Ryan Johnston is a banking structure associate in the Research Department of the Federal Reserve Bank of Philadelphia. The views expressed in this review are not necessarily those of the Federal Reserve.

banks as TBTF may not monitor the banks' activities as closely as they normally would. They may also accept lower returns from large banks. In turn, this advantage may encourage too much risk-taking by large banks. TBTF funding advantages may also encourage banks to become too large or promote other inefficiencies such as monopoly profits or too little lending. Apart from these inefficiencies, policymakers might be concerned that a funding advantage for large banks could create unfair competition for smaller banks.

On the face of it, determining whether some banks have a funding advantage should be easy. Banks fund themselves with a mixture of deposits, bonds, and equity. Why not just compare the funding costs of large banks versus smaller banks? But as former Federal Reserve Governor

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Randall Kroszner has said, to know whether any funding difference is due to TBTF perceptions, we need to be comparing apples with apples.⁷ There is a lot of evidence that large banks have advantages from economies of scale.⁸ In addition, their funding mix and business models differ from those of small banks.

How can we solve the apples-to-apples question? What evidence is there for the existence of a TBTF subsidy prior to the financial crisis? What about post-Dodd–Frank? In this article, we focus on the evidence from two rigorous approaches to the apples-to-apples issue. We are most interested in results for the post-Dodd–Frank period.

ARE BIG BANKS DIFFERENT FROM OTHER BIG FIRMS?

The first approach aims to get around the apples-to-apples issue by examining the differences in size-related funding costs for financial and nonfinancial institutions. This approach asks whether large banks have a greater funding advantage over small banks than other large firms have over small firms in their industries. The underlying idea of this comparison is that many of the factors that give large banks

a funding advantage over smaller banks — such as broader access to public debt markets — also give large nonfinancial firms a funding advantage over smaller nonfinancial firms. However, there is no reason to expect government bailouts in most nonfinancial industries because they do not have the extensive interconnectedness and systemic footprint that the financial industry has. So, this comparison helps isolate any TBTF subsidy. Since nonfinancial firms do not take deposits, these studies focus on the costs of bond financing.

Javed Ahmed, Christopher Anderson, and Rebecca Zarutskie compare bond funding costs for commercial banks and investment banks with bond funding costs for 14 other nonfinancial industries.⁹ They examine three periods: before (2004 Q1–2008 Q2), during (2008 Q3–2009 Q2), and after (2009 Q3–2013 Q2) the financial crisis. They find that there is a size-related funding advantage in all industries, including commercial banks and investment banks. But they do not find a size-related bond-funding advantage for commercial and investment banks when compared with other industries in any period.¹⁰

They also compare the size effect separately for commercial banks, investment banks, and 12 other industries. Out of those 14 industries, commercial banks and investment banks rank only ninth and 10th in size-related bond funding advantage — below, for example, business equipment and chemicals. Interestingly, they find that the category of “other financial” industries, which includes insurance and asset management firms, ranks high in size-related funding advantage.

While the comparison of larger and smaller firms across industries is designed to control for a wide range of size-related differences that would affect bondholders' perceived risk of default, the authors of this study — and all the other studies I discuss — also seek to control for default risk more directly. In this study, they include a measure of the default risk on a firm's bonds from Moody's Analytics. So, for example, regulatory factors such as higher capital requirements for larger banks will reduce the likelihood that bondholders will bear losses, and this lower likelihood will be reflected in Moody's measure of default risk.

A different study seeks to compare apples with apples through a variation on that same approach: Viral Acharya, Deniz Anginer, and Joseph Warburton ask whether the sensitivity of bond spreads to various measures of credit risk differs for large financial firms compared with large nonfinancial firms. Note that unlike in the study by Ahmed and his colleagues, financial firms in this study include insurance companies and asset management companies.

Their idea is that a TBTF subsidy would make bond yields for the largest financial firms less sensitive to measures of credit risk compared with smaller financial firms, while this would not be true for nonfinancial firms.¹¹

Their main finding is that while a decrease in risk leads to a large reduction in yields for banks below the 90th percentile in size, banks above the 90th percentile have much less sensitivity to credit risk. Meanwhile, there is no such change in the risk sensitivity of yields for the largest nonfinancial firms. They calculate a subsidy of around 20 basis points before the crisis, rising above 100 basis points in 2009, and falling to around 30 basis points in 2012. So unlike the prior study, they estimate that there is a significant TBTF subsidy, even following the passage of Dodd–Frank.

Why do the results of these two studies differ? There are a few possibilities. First, the sample period in the first study ends one year later, so perceptions about TBTF could have evolved as regulatory changes continued after Dodd–Frank. Another reason could be that the two studies divide the financial and nonfinancial firms differently. The first study separates commercial banks and investment banks from other financial institutions, while the second study includes all financial firms as one group. And it was precisely the other financial firms in the first study that appeared to have a size-related funding advantage.

The difference in results is illuminated by another analysis, which uses a substantially similar methodology to the one by Acharya and his coauthors. A study by John Lester and Aditi Kumar focuses on only the very largest commercial and investment banks, and the sample period extends through 2013. They find a 36 basis point funding benefit for the largest banks in 2012 — not so different from Acharya and his coauthors — but essentially no funding benefit to being a very large bank in 2013.

DO LARGE BANKS PAY LESS FOR UNINSURED DEPOSITS?

The second approach analyzes deposit rates to compare the differences in funding advantages between large and small banks. If large banks have a funding advantage because of TBTF perceptions, it should show up as a smaller differential between rates on uninsured deposits compared with insured deposits. Unfortunately, only one study uses this approach to measure the subsidy in the postcrisis period, although a second study is helpful for putting the results in perspective.

William Bassett compares the interest rate differential paid by large and small banks on small time deposits

— which are fully insured — and interest-bearing transactions and saving accounts — which are not fully insured.¹² The main comparison is between the largest banks and large regional banks. Bassett argues that this comparison is more relevant than comparing large and small banks if we are interested in TBTF versus other reasons why we might observe a size-related funding differential.

Bassett compares the funding differential for banks with assets of more than \$125 billion and banks with assets of \$20 billion to \$125 billion. First, he demonstrates that the interest rates on small time deposits are not sensitive to measures of bank risk for either large or smaller banks, evidence that rates on insured deposits do not include a premium for default risk. He then compares the rates on interest-bearing savings and time deposits. Consistent with the view that these deposits are not viewed by depositors

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as fully insured, he shows that rates on these deposits are sensitive to risk.

Bassett compares the difference in the rates on uninsured and insured deposits for large and smaller banks in the precrisis and postcrisis periods. He finds a statistically insignificant funding advantage of 10 basis points in the precrisis period and no advantage in the postcrisis period. While Bassett's analysis provides no evidence of a TBTF subsidy — particularly in the postcrisis period — he notes that any such subsidy may be difficult to find in the environment of low interest rates and stable conditions that has prevailed since the Great Recession.

Stefan Jacewitz and Jonathan Pogach provide no evidence of a TBTF premium for the post-Dodd–Frank period, but their research helps to put bounds on the size of any pre-Dodd–Frank TBTF subsidy.¹³ Like Bassett, they compare the differential between rates paid on insured and uninsured funding sources by large and small banks. They focus on a narrower type of funding, money market deposit accounts (MMDAs), and consider the different interest rates paid on

insured versus uninsured MMDAs. Prior to 2009, MMDAs in excess of \$100,000 were uninsured. Their main test compares the differential for banks with assets exceeding \$200 billion and all other banks. This is a relatively clean comparison, because regulatory restrictions impose uniformity on both large and small MMDAs. It is also economically important because MMDAs account for 35.3 percent of banks' liabilities.¹⁴

Jacewitz and Pogach's main finding is that prior to the crisis, banks with assets greater than \$200 billion had a 40 basis point funding advantage, but the spread declined to nearly zero when all MMDAs began to be insured during the financial crisis. This decline to zero once the larger accounts were insured is evidence that the measured differential reflects a TBTF subsidy. But the fraction of the differential that can reasonably be ascribed to TBTF is probably too large, as Jacewitz and Pogach themselves suggest.

They also try out a range of specifications to better understand the underlying source of the precrisis funding advantage for large banks. In particular, they find a significant premium of 21 basis points for banks with assets above \$10 billion compared with all other banks. Then again, few would argue that a \$10 billion bank would ever be considered important enough to the stability of the financial

system to be bailed out. This reality suggests that up to 21 basis points of the measured funding advantage can't be explained by TBTF and leaves us with an estimate of the TBTF subsidy prior to the crisis ranging from a modest 20 basis points to a more significant 40 basis points.

CONCLUSION

There is evidence supporting and disputing the continued existence of TBTF subsidies. There are also many methods that can be used to find evidence of a TBTF subsidy that go beyond the studies reviewed here. The weight of the evidence is that while there may have been significant TBTF subsidies prior to and during the financial crisis, following the crisis any subsidies are small. In addition, there is evidence that funding costs now more accurately measure actual bank risk.¹⁵ This apparent absence of meaningful postcrisis subsidies could be partly due to the rules and regulations resulting from Dodd–Frank. Investors may now believe that they would have to take a hit to their wallets if a large bank were to fail. However, the low interest rate environment and relatively stable conditions in banking markets make it difficult to disentangle any subsidy by examining funding costs. ■

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NOTES

¹ The term *bailout* refers to a government intervention in which the bank is kept from failing and uninsured claimants are made whole.

² While size is one feature that might make a bank TBTF, other factors such as organizational complexity, dependence on funds that might disappear in a crisis, and interconnectedness with other financial institutions can affect banks' systemic risk. The notion of TBTF incorporates all of these factors.

³ Regulators incorporate a bank's stress test results into their quantitative assessment in an annual Comprehensive Capital Analysis and Review (CCAR), which evaluates the bank's "capital adequacy, capital planning process, and planned capital distributions, such as any dividend payments and common stock repurchases. As part of CCAR, the Federal Reserve evaluates whether BHCs [bank holding companies] have sufficient capital to continue operations throughout times of economic and financial market stress and whether they have robust, forward-looking capital-planning processes that account for their unique risks. The Federal Reserve may object to a BHC's capital plan on quantitative or qualitative grounds. If the Federal Reserve objects to a BHC's capital plan, the BHC may not make any capital distribution unless the Federal Reserve indicates in writing that it does not object to the distribution." See <http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20160623a1.pdf>.

⁴ Banks must also conduct their own stress tests under the same scenarios as well as tests under bank-developed scenarios. For more information on CCAR, Dodd–Frank Act stress tests, resolution plans, and other capital requirements, see the Federal Reserve Board's banking and regulation web pages at <http://www.federalreserve.gov/bankinfo/reg/default.htm>.

⁵ There are critics who do not believe that Dodd–Frank will prevent bank bailouts. This article does not focus on whether Dodd–Frank will actually prevent bailouts. Instead, it concentrates on the market's perception that a bank will be bailed out.

⁶ The Fed bases its GSIB designations on criteria developed by the Bank for International Settlements' Basel Committee on Banking Supervision, which include the bank's "size, interconnectedness, lack of readily available substitutes or financial institution infrastructure, global (cross-jurisdictional) activity and complexity." See <http://www.bis.org/publ/bcbs207.htm>.

⁷ See Randall Kroszner's survey of the evidence.

⁸ See the article by Joseph Hughes and Loretta Mester for evidence of significant scale economies.

⁹ In addition, they examine credit default swap (CDS) spreads. A CDS is a type of insurance contract in which the seller of the CDS promises to pay the buyer of the contract in the event of default on the firm's insured bonds. So, a smaller spread means there is a lower perceived risk of default on the firm's bonds. I focus on their results for bond spreads to facilitate the comparison with other studies.

¹⁰ Their evidence for CDS spreads is largely similar. However, they find evidence that CDS spreads were lower for larger commercial and investment banks during the crisis, potential evidence of a TBTF funding advantage at the time.

¹¹ To bolster their case that their results do not depend on the use of a particular measure of default risk, Acharya and his coauthors use a number of measures of default risk and get similar results. As in the study by Ahmed et al., this study includes measures of default risk in regressions to control for firms' risk of default for reasons other than size.

¹² Small time deposits are defined as deposits of less than \$100,000. Before October 3, 2008, deposits smaller than \$100,000 were fully insured by the Federal Deposit Insurance Corporation (FDIC). After October 3, 2008, deposits of \$250,000 or less became fully insured.

¹³ Evidence of a TBTF subsidy would not be expected after the rise in the insurance limit for MMDAs in 2008.

¹⁴ In addition, Jacewitz and Pogach examine pricing at the branch level to help control for differences in funding costs due to scale economies.

¹⁵ See Philip Strahan's article.